

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Wireless Telecommunications Bureau)	
Seeks Comments Regarding Intelligent)	WT Docket No. 01-90
Transportation System Applications Using)	
Dedicated Short Range Communications)	

**COMMENTS OF THE INTELLIGENT
TRANSPORTATION SOCIETY OF AMERICA**

Robert B. Kelly
Mark D. Johnson
SQUIRE, SANDERS & DEMPSEY, LLP
1201 Pennsylvania Avenue, N.W.
Post Office Box 407
Washington, DC 20044-0407
(202) 626-6600

Its Counsel

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The Intelligent Transportation Society of America ("ITS America"),¹ by its attorneys hereby respectfully submits its comments in response to the *Request for Comment* issued by the Commission in the above-captioned proceeding.²

I. INTRODUCTION AND SUMMARY

On October 22, 1999, the Commission issued the *DSRC Report & Order* that allocated 75 megahertz of spectrum at the 5.850-5.925 GHz band to the mobile service for use by Dedicated Short Range Communications ("DSRC") systems operating in the Intelligent Transportation

¹ ITS America is organized to be the focal point for facilitating the consensus necessary to develop and deploy Intelligent Transportation System ("ITS") applications for improving the efficiency and safety of the nation's surface transportation systems. Members include organizations that develop, deploy, market, research, buy, sell and use ITS products, services and systems, and representing the private sector, local, state, federal and international government agencies, academic institutes and research centers, and other associations. ITS America also serves as a utilized Federal Advisory Committee to the U.S. Department of Transportation. 5 U.S.C. Appendix.

² *Wireless Telecommunications Bureau Seeks Comment Regarding Intelligent Transportation System Applications Using Dedicated Short Range Communications*, WT Docket No. 01-90, Public Notice, DA 01-686 (rel. March 16, 2001) ("*Request for Comment*").

Systems (“ITS”) radio service.³ The Commission also adopted ITS America’s proposed definition of DSRC services, which is set forth in Section 90.7 of its Rules.⁴ The allocation was made in response to ITS America’s Petition for Rulemaking requesting a spectrum allocation in the 5.850-5.925 GHz band for DSRC-based ITS services.

In its Petition for Rulemaking, ITS America did not propose a specific channelization plan, licensing method or technical rules, stating instead that these issues required development of industry consensus through standardization activities and further Commission proceedings. Nonetheless, in the *DSRC Report & Order*, the Commission adopted basic technical requirements in order to promote spectrum sharing and also create an underlying framework for the development of DSRC operational standards by industry.⁵ The Commission also proposed to address these and other, related matters in a future proceeding proposing licensing and service rules.⁶

³ *In the Matter of Amendment of Parts 2 and 90 of the Commission’s Rules to Allocate the 5.850-5.925 GHz Band to the Mobile Service for Dedicated Short Range Communications of Intelligent Transportation Services*, ET Docket No. 98095, Report and Order, 14 FCC Rcd 18221 (rel. Oct. 22, 1999) (“*DSRC Report & Order*”).

⁴ The definition reads:

The use of non-voice radio techniques to transfer data over short distances between roadside and mobile radio units, between mobile radio units, and between portable and mobile units to perform operations related to the improvement of traffic flow, traffic safety and other intelligent transportation system applications, in a variety of public and commercial environments. DSRC systems may also transmit status and instructional messages related to the units involved.

47 C.F.R. § 90.7.

⁵ See *DSRC Report & Order* at 18231-36 (discussing spectrum channelization, power levels, emission limits, RF safety guidelines and unlicensed DSRC operations).

⁶ *Id.* at 18231.

On October 6, 2000, ITS America submitted to the Commission a Status Report (“*Status Report*”) to advise the Commission of efforts made to date toward building a consensus among ITS stakeholders on the optimal service and licensing rules for the allocation.⁷ Generally, according to the *Status Report*, the issues being considered by the industry are the balancing of public safety DSRC requirements with private and commercial uses, the accommodation of competing technical approaches, and the optimal licensing approach to attain a critical mass in industry deployment. ITS America also requested that the Commission seek public comment on the issues addressed in the *Status Report* in anticipation of a Notice of Proposed Rulemaking promulgating service and license rules for the DSRC spectrum allocation.

ITS America submits these comments, first, to update the Commission on current activities to develop a common, national DSRC standard in order to ensure the interoperability of these applications; second, to propose that the definition of DSRC services appearing in the Commission’s rules be revised to state clearly that Commercial Mobile Radio Services (“CMRS”) applications are neither suitable nor intended for the allocation; and, third, to suggest that expanded eligibility requirements be enacted in order to include “nontraditional” public safety entities that are likely to utilize the DSRC spectrum.

II. ACTIVITIES SINCE OCTOBER 2000

As described in the *Status Report*, ITS America has sponsored, and continues to sponsor, industry meetings and workshops to support the allocation.⁸ The standards drafting effort, conducted under the auspices of the American Society for Testing and Materials (“ASTM”)

⁷ See *Status Report on Industry Discussions on Licensing and Service Issues and Deployment Strategies for DSRC-Based Intelligent Transportation Systems Services in the 5.850-5.925 GHz Band*, WT Docket No. 01-90, Status Report (submitted October 6, 2000) (“*Status Report*”).

⁸ *Status Report* at 5-13.

Working Group E17.51, has continued to meet monthly with a focus toward setting standards for DSRC-related equipment operating in the 5.9 GHz band. Progress has been made on evaluating the various DSRC technologies and architectures as described in the *Status Report*.⁹

During the January 24-25, 2001 meeting of the standards working group, two DSRC technologies were selected as the leading candidate technologies for a DSRC standard after a “down select” voting process within the working group. The two candidate technologies are: (1) Motorola’s FreeSpace; and (2) an IEEE 802.11(a) standard using the Orthogonal Frequency Division Multiplex (“OFDM”) modulation. They will now be subject to “head-to-head” testing and evaluation in order to provide the necessary data to select a final standard. Although these are the leading candidate technologies, the working group has not ruled out other possible technologies to ensure that spectral efficiency is maximized. In addition, the working group will address and resolve any intellectual property rights issues associated with the selected technology.

At its March 7-8, 2001 meeting, the standards working group launched the testing phase of the standards development process, which is being partially funded by the U.S. Department of Transportation and other government agencies. Further discussions at this March meeting focused on testing procedures, testing scenarios, evaluation criteria and timelines. Detailed plans for the testing were finalized at the working group’s most recent meeting on April 19-20, 2001.

The next meeting of the standards working group is scheduled for May 17, 2001, in Detroit, Michigan. Representatives from the automobile industry have been invited to this meeting in order to commence a dialogue regarding the integration of DSRC applications into vehicles, as well as to discuss the capabilities of DSRC technologies and applications. A

⁹ See *id.* at 24-29.

subsequent meeting is scheduled for June 26-27, 2001, in Washington, DC. In June, the standards working group is expected to review the initial test results and evaluations and recommend areas of further study.

III. DSRC SPECTRUM MUST BE ALLOCATED TO MEET CRITICAL PUBLIC SAFETY NEEDS AND PRIVATE RADIO APPLICATIONS.

In the *Status Report*, ITS America described three possible scenarios for the allocation of the 75 MHz of DSRC spectrum: (1) allocate the entire 75 MHz for public safety use; (2) divide the frequency band between public safety and private radio use; or (3) divide the spectrum among public safety, private radio and commercial use.¹⁰ The second proposed allocation plan – dividing the spectrum between public safety and private radio uses, with the public safety uses predominating – is emerging as the preferred alternative. Further evaluation of the candidate list of DSRC applications, as well as a review of the requirements of the DSRC applications currently under consideration by the standards writing group, has led ITS America to the conclusion that the DSRC spectrum is neither suitable nor intended for cellular-based commercial wireless applications, such as Commercial Mobile Radio Services (“CMRS”). Private radio applications and commercial entities providing such services are expected to play an important role in the deployment of DSRC applications, and in a manner consistent with the allocation. ITS America reiterates that the DSRC spectrum must be allocated to meet critical public safety needs of the transportation industry, particularly for roadside-to-vehicle and vehicle-to-vehicle applications.¹¹ Accordingly, the DSRC spectrum should not be made

¹⁰ *Status Report* at 19-22. Inadvertently, the discussion of the third scenario as it appeared in the *Status Report* failed to include “private radio” in the scenario description. “Private radio” should be included in the third scenario.

¹¹ *See id.* at 17-19.

available for licensing and use for CMRS applications that are inconsistent with the spectrum's overriding public safety purpose.

In the *DSRC Report & Order*, the Commission adopted the following definition of DSRC services:

The use of non-voice radio techniques to transfer data over short distances between roadside and mobile radio units, between mobile radio units, and between portable and mobile units to perform operations related to the improvement of traffic flow, traffic safety and other intelligent transportation system applications, in a variety of public and commercial environments. DSRC systems may also transmit status and instructional messages related to the units involved.¹²

ITS America suggests that the Commission revise this definition by removing the reference to “commercial” environments and replacing it with “private” environments to refer to private radio DSRC uses.

IV. ELIGIBILITY OF DSRC APPLICATIONS FOR CONSIDERATION AS PUBLIC SAFETY OR PRIVATE RADIO APPLICATIONS

In the *Status Report*, ITS America also included a list of candidate DSRC applications across several broad functional categories.¹³ These potential DSRC applications perform operations related to the improvement of traffic flow and traffic safety. Therefore, they conform to the definition of DSRC services as promulgated by the Commission.¹⁴ These candidate applications may be categorized as either public safety or private radio uses. This initial list is not intended to be exhaustive. Rather, it is expected that additional candidate applications will be proposed as the spectrum is utilized.

¹² 47 C.F.R. § 90.7 (emphasis added).

¹³ *Id.* at 6-8.

¹⁴ *See* 47 C.F.R. § 90.7.

In order to determine the applicable public safety eligibility requirements for the DSRC spectrum, ITS America suggests that the Commission look to its recent rulings regarding the licensing eligibility for public safety spectrum found in the Balanced Budget Act of 1997.¹⁵ Congress enacted or revised two relevant provisions regarding public safety spectrum that may potentially affect how the Commission implements the DSRC spectrum. First, in new Section 337,¹⁶ Congress ordered the Commission to make available 24 MHz of new spectrum in the 746 to 804 MHz band, resulting from the conversion of TV channels 60-69 to Digital TV, for public safety uses. This provision also includes specific eligibility criteria.¹⁷

In addition, Congress mandated in the Balanced Budget Act of 1997 that new spectrum be licensed through competitive bidding procedures or auctions.¹⁸ To protect public safety services, Congress included an exemption from this mandate for “traditional” public safety service providers, such as police, fire, and emergency medical agencies.¹⁹ Congress then extended this exemption to a new category of “nontraditional” public safety entities, such as utilities, railroads, transit systems, which also provide essential services to the public and, therefore, need reliable communications.²⁰ In implementing this new provision, the Commission first concluded that state and local governments qualify for this exemption without any further

¹⁵ Balanced Budget Act of 1997, Pub. L. No. 105-33, 111 Stat. 251 (1997).

¹⁶ 47 U.S.C. § 337.

¹⁷ *Id.* at § 337(f)(1).

¹⁸ 47 U.S.C. § 309(j)(1) (as amended by the 1997 Balanced Budget Act, § 3002).

¹⁹ 47 U.S.C. § 309(j)(2)(A).

²⁰ *Id.*

showing of eligibility.²¹ Using a two-part test, the Commission next adopted an expanded definition of “public safety services” to include such “nontraditional” public safety entities that (1) have an infrastructure used primarily for the purpose of providing essential public services to the public; and (2) need, as part of their everyday mission, reliable and available communications to prevent or respond to disasters or crises affecting the public.²² While this new definition does not include all private wireless services, it does encompass utilities, pipelines, transit systems, private ambulances and volunteer fire departments, all of which were not previously considered public safety service providers by the Commission.²³ Finally, state and local governments, and these new nontraditional public safety service providers, must use the exempted spectrum primarily to “protect life, health, or property,” and not make their services commercially available to the public.²⁴

In the *Status Report*, ITS America noted that many of the candidate DSRC applications, such as in-vehicle signing, intersection collision avoidance systems, and electronic toll collection would qualify as “public safety services” as they will be used to protect the safety of life, health

²¹ *In the Matter of Implementation of Sections 309(j) and 337 of the Communications Act of 1934*, WT Docket No. 99-97, Report and Order and Further Notice of Proposed Rulemaking, FCC 00-403, ¶ 69 (rel. Nov. 20, 2000) (“*Implementation of Sections 309(j) and 337 Report & Order/FNPRM*”).

²² *Id.* at ¶ 77. By contrast, Congress included stricter qualifications for the new public safety spectrum in the 746-804 MHz band. Section 337(f)(1), permits non-governmental public service providers to have access to this spectrum only after receiving prior authorization from a governmental agency whose primary mission is the provision of such public safety services. 47 U.S.C. § 337(f)(1)(B).

²³ *Implementation of Sections 309(j) and 337 Report & Order/FNPRM* at ¶¶ 75-79. The Commission also cited the Conference Report accompanying the 1997 Balanced Budget Act as additional evidence that Congress intended this exemption to apply to these and other nontraditional public service providers. See H.R. Conf. Rep. No. 105-217, 105th Cong., 1st Sess., at 572 (1997).

²⁴ *Implementation of Sections 309(j) and 337 Report & Order/FNPRM*. at ¶¶ 72, 82.

or property and would not be commercially available to the public.²⁵ Consequently, ITS America further urged that the Commission adopt an “expansive and inclusive” definition of public safety services for the DSRC spectrum because of the strong potential to use many of the same DSRC applications in both public and private applications.²⁶ The Commission’s recent implementation of Section 309(j) offers a model for determining the public safety eligibility requirements for the DSRC spectrum: many DSRC applications will be implemented by private, nongovernmental entities more accurately categorized as “nontraditional” public safety entities. Expanded public safety eligibility requirements, in accordance with those enacted by Congress in Section 309(j), will go far to ensure a robust and expeditious deploy of DSRC applications in the 5.9 GHz band.

V. CONCLUSION

ITS America firmly believes that a single, open, national standard for DSRC Public Safety applications is required to ensure national interoperability – the primary goal of the national ITS program as established by Congress in the Transportation Equity Act for the 21st Century.²⁷ The selection of this one standard is the highest priority of the standards working group.

²⁵ *Status Report* at 35.

²⁶ *Id.*

²⁷ Pub. L. No. 105-178, 112 Stat. 107 (1998).

Further, ITS America requests that the Commission release a Notice of Proposed Rulemaking proposing service and licensing rules for the DSRC spectrum allocation. This NPRM should include a comprehensive review of the appropriate public safety eligibility requirements, including whether such requirements encompass “nontraditional” public safety entities offering DSRC applications. ITS America also expects that the initial testing results will be available to the Commission in time for its preparation of the NPRM.

Respectfully submitted,

Intelligent Transportation Society
of America

By: /s/ Robert B. Kelly_____

Robert B. Kelly
Mark D. Johnson
SQUIRE, SANDERS & DEMPSEY, LLP
1201 Pennsylvania Avenue, N.W.
Post Office Box 407
Washington, DC 20044-0407
(202) 626-6600

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